

## Are eHealth interventions for obesity prevention effective? A systematic review of reviews

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### Background

In the last ten years, research on the use of technology for health promotion has produced an increasing number of studies and reviews. This paper aims to summarise the review evidence and assess its methodological quality, in order to draw conclusions about the effectiveness of eHealth interventions for weight management.

### Methods

Systematic methods were used to identify and assess the review evidence about technology-based interventions for addressing behaviours associated with weight management and weight related outcomes. We searched 16 databases for articles published up to December 2014. Following a review protocol (PROSPERO: CRD42014010323), two reviewers independently selected review articles and applied the AMSTAR checklist to assess their methodological quality.

### Results

We identified 16 systematic reviews that discussed the effects of interventions using both mobile and/or web-based technologies on weight management (12 narrative syntheses and four meta-analysis). All reviews provide suggestive, albeit mixed evidence of the effectiveness of such interventions.

The meta-analysis on social networking sites showed that interventions produced a modest, significant reduction in BMI. Few studies differentiated between web and mobile technologies, when evaluating intervention effects. Using the AMSTAR checklist, the average methodological quality was low, with only two out of 16 reviews being of high quality (one meta-analysis of B quality and one systematic review of A quality).

### **Conclusions**

The available review evidence suggests that eHealth interventions may produce positive effects on weight-related outcomes. However, the evidence cannot be considered conclusive, due to limitations in the methodological quality of the reviews. Good quality review evidence is needed to compare the effectiveness across different delivery modes and examine whether the results are generalizable.

### **Key messages**

- eHealth interventions might produce positive effects on weight-related outcomes, but the evidence is not conclusive
- Good quality review evidence is needed to examine in more detail the content of eHealth interventions, identifying which components are associated with larger effects